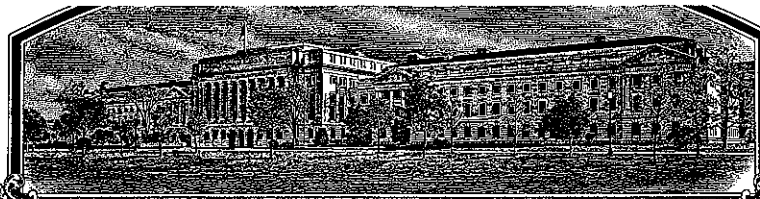


No.

200100043



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Agriculture and Agri-Food Canada and
Wisconsin Alumni Research Foundation

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR PROPAGATING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED IN THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

POTATO

'AC Glacier Chip'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this seventh day of February, in the year two thousand and eight.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER Agriculture and Agri-Food Canada and Wisconsin Alumni Research Foundation		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME WIS 75-30		3. VARIETY NAME AC Glacier Chip	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) Director, Agriculture and Agri-Food Canada, 5403-1st Ave South, Lethbridge, Alberta, Canada T1J 4B1		5. TELEPHONE (include area code) 403-327-4561		FOR OFFICIAL USE ONLY	
		6. FAX (include area code) 403-382-3156		PVPO NUMBER 200100043	
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) Dept. of Canadian Federal Govt.		8. IF INCORPORATED, GIVE STATE OF INCORPORATION N/A		FILING DATE 12/29/00	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) c/o Dr. S.D. Morgan Jones Director Agriculture and Agri-Food Canada Research Centre 5403-1st Ave South Lethbridge, Alberta Canada T1J 4B1				FILING AND EXAMINATION FEES: \$ 2705 DATE 12/29/00 CERTIFICATION FEE: \$ 768.00 DATE 10/11/07	
11. TELEPHONE (Include area code) 403-327-4561		12. FAX (Include area code) 403-382-3156		13. E-MAIL morganjones@em.agr.ca	
				14. CROP KIND (Common Name) Potato	

18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)

- a. ☒ Exhibit A. Origin and Breeding History of the Variety
- b. ☒ Exhibit B. Statement of Distinctness
- c. ☒ Exhibit C. Objective Description of Variety
- d. ☒ Exhibit D. Additional Description of the Variety (Optional)
- e. ☒ Exhibit E. Statement of the Basis of the Owner's Ownership
- f. ☒ Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)
- g. ☒ Filing and Examination Fee (\$2,450), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)

19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 63(a) of the Plant Variety Protection Act

- ☒ YES (If "yes", answer items 20 and 21 below) ☒ NO (If "no," go to item 22)

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES?

IF YES, WHICH CLASSES? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

21. DOES THE OWNER SPECIFY THAT THE CLASSES BE LIMITED AS TO NUMBER OF GENERATIONS?

IF YES, SPECIFY THE NUMBER 1, 2, 3, etc. ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

See explanation on next page

(If additional explanation is necessary, please use the space indicated on the reverse.)

22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?

☒ YES ☐ NO

IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)

23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)?

☒ YES ☐ NO

IF YES, GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)

24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER

Dr. S.D. Morgan Jones

NAME (Please print or type)

Dr. S.D. Morgan Jones

CAPACITY OR TITLE

Director

DATE

NOV 7, 2000

SIGNATURE OF OWNER

Bryan E. Renk

NAME (Please print or type)

BRYAN E. RENK

CAPACITY OR TITLE

REGISTERED OF PATENTS + LICENSING

DATE

11/27/00

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$2,450 (\$300 filing fee and \$2,150 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. **Retain one copy for your files.** All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$300 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvp.htm>

ITEM

- 18a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
19. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (*See Regulations and Rules of Practice, Section 97.103*).
21. See Section 83 of the Act for the Contents and Term of Plant Variety Protection.
22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
23. See Section 5.5 of the Act for instructions on claiming the benefit of an earlier filing date.

21. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

Limited to six field generations beyond stocks laboratory tested to confirm pathogen free status which may be tissue culture plantlets or greenhouse produced minitubers.

22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

AC Glacier Chip was sold to Options Inc. (Connell, WA) on May 31, 2000 (44,880 CWT) for a commercial scale trial.

23. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

Accepted for filing in Canada on June 25, 2000 with application #99-1618 (July 2000 issue of The Plant Varieties Journal page 15 of The Canadian Plant Breeders Rights Office).

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (*See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.*)

To avoid conflict with other variety names in use, the applicant must check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center—East, Beltsville, MD 20705. Telephone: (301) 504-8089.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact the USDA's TARGET Center at 202-720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

DRAFT Exhibit A Form

1. Describe the genealogy (back to and including public and commercial varieties, lines, or clones used) and the breeding method(s).

the cross [Wischip (Wis 55-232-58 X Wis 231) X Wis 69-49-74 (Wis 63-508-65 X Lenape)] was made by the University of Wisconsin in 1975 and received by the AAFC Lethbridge Research Centre in 1980 after 3 years of field selection in Wisconsin. The clone was included in the regional trial system of the Lethbridge Research Centre breeding program from 1980-1988. Selection criteria included tuber yield, chipping quality, specific gravity and disease resistance.

2. Give the details of subsequent stages of selection and multiplication.

Year	Detail of Stage	Selection Criteria
1989 1 1996	Industry evaluation in Alberta, Canada	Chipping quality and yield.
1997	Large scale trial by the Potato Growers of Alberta	

3a. Is the variety uniform? ☒ Yes ☐ No

How did you test for uniformity?

Morphological uniformity was assessed in field trials (Regional Trials) conducted from 1980-1988.

3b. Is the variety stable? ☒ Yes ☐ No

How did you test for stability? Over how many generations?

The presence of variants was assessed in the field or from tissue culture stocks since testing commenced at the Lethbridge Research Centre in 1980. No variants have been identified.

4. Are genetic variants observed or expected during reproduction and multiplication? ☐ Yes ☒ No

If yes, state how these variants may be identified, their type and frequency.

Continue on additional pages if necessary.

Exhibit A

Origin and Breeding History of the Variety

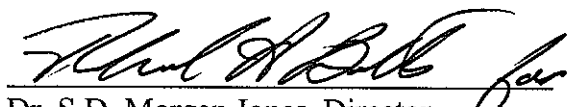
AC Glacier Chip was registered in Canada by the Variety Registration Office of the Canadian Food Inspection Agency on June 12, 2000 (Certificate #5149). The original cross was made in 1975 by the University of Wisconsin (Wischip (female) and WIS69-49.74 (male)). AC Glacier Chip was included in a breeding population of clones provided to Agriculture and Agri-Food Canada's Lethbridge Research Centre (AAFC-LRC) by the University of Wisconsin Potato Breeding Program in 1980. The final selection was made by AAFC-LRC.

The variety was included in the regional trials of the Western Canadian Potato Breeding Program for 8 years under the seedling designation WIS75-30. These replicated trials are conducted at trial sites in Alberta, Saskatchewan and Manitoba. Evaluation (research plots) by the Western Canadian Potato Industry commenced in 1989. In 1996 the variety (WIS75-30) was offered to the Western Potato Consortium (Industry/AAFC-LRC partnership for market development of Lethbridge Research Centre potato varieties) and the exclusive right to commercialize was assigned to the Potato Growers of Alberta (6008-46th Avenue, Taber, Alberta, Canada T1G 2B1).

In 1997, 1998 and 1999 AC Glacier Chip was included in replicated multi-harvest trials in Alberta by AAFC-LRC and chip quality from the final harvest stage monitored out of storage for up to 8 months after the final harvest. In 1998 and 1999 the variety was included in the North Central Trials (NCR-84) at several sites in the United States of America and Canada. Pathogen free tissue cultures available from Agriculture and Agri-Food Canada (Lethbridge Research Centre), have been provided to the Potato Growers of Alberta and used to produce an Elite seed source in Alberta, Canada. Quantitative data from the Western Canadian Regional Trials, North Central Trial and the multi-harvest trials are not presented as a part of this application. In 2000 a large scale trial of AC Glacier Chip was conducted in the USA by the Potato Growers of Alberta.

AC Glacier Chip under the denomination WIS75-30 was accepted for filing in Canada on the 25th of June, 1999 (Application # 99-1681 in the July 1999 issue of the Plant Varieties Journal page 15). The denomination has since been changed to AC Glacier Chip, field inspection completed and the detailed description published in the July, 2000 issue (page 41) of the Plant Varieties Journal. The Plant Breeder's Right will be jointly held by Agriculture and Agri-Food Canada and the University of Wisconsin.

No variants have been identified either in the field or from tissue-cultured stocks since the original selection in 1989 indicating that AC Glacier Chip is uniform and stable.


Dr. S.D. Morgan Jones, Director

DRAFT Exhibit B Form

Based on overall morphology, WIS 75-30 is most similar to SNOWDEN.
Applicant's new variety *Most similar comparison variety(ies)*

WIS 75-30 most clearly differs from SNOWDEN in the following traits:
Applicant's new variety *Most similar comparison variety(ies)*

Name the specific trait, then list the value of that trait for each variety in the comparison. Attach appropriate supporting evidence (see the Guidelines for Presenting Evidence in Support of Variety Distinctness, available from the PVP Office or website).

<i>Eg. Terminal leaflet tip shape</i> <i>Eg. Corolla inner Color</i> <i>Eg. NumberEye/Tuber</i>	<i>Cuspidate</i> <i>Violet (85A)</i> <i>15 +/- 2 (N=100)</i>	<i>Obtuse</i> <i>Red Purple (74B)</i> <i>30 +/- 4 (N=100)</i>	<i>photograph attached</i> <i>Royal Horticultural</i> <i>Society Colour Chart</i> <i>statistics attached</i>
1. Qualitative traits: - Growth Habit - Tuber shape - Light sprout shape	Applicant's New Variety <u>WIS 75-30</u> spreading Oval Conical	1 st Comparison Variety <u>Snowden</u> Semi-erect Round Ovoid	Location of Evidence Photo attached Photo Attached Photo Attached
2. Color traits: - Light sprout Base - Light sprout Tip	Red-Violet Red-Violet	Green Green	Photo attached Photo attached
3. Quantitative traits:			
4. Other: - Tuber Skin Texture - Light sprout base pubescence	Smooth medium	Flaky weak	Photo attached Photo attached

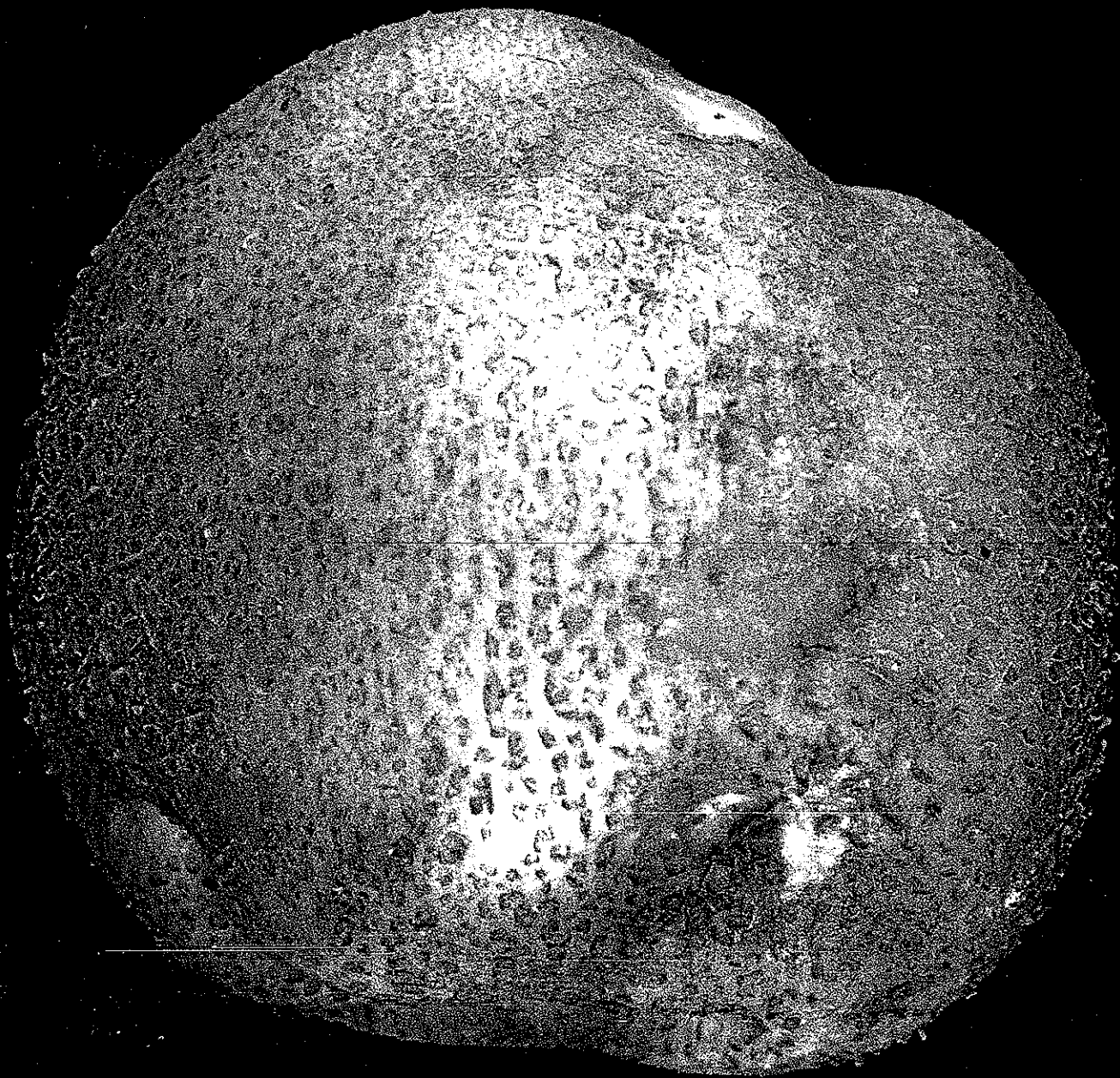
Use additional tables to present clear differences for additional comparison varieties. Use additional pages to present supporting evidence.

WIS 75-30 - Turbidity Texture

#200100043

Snowden - Tuber skin texture

#200100043



SNOWDEN

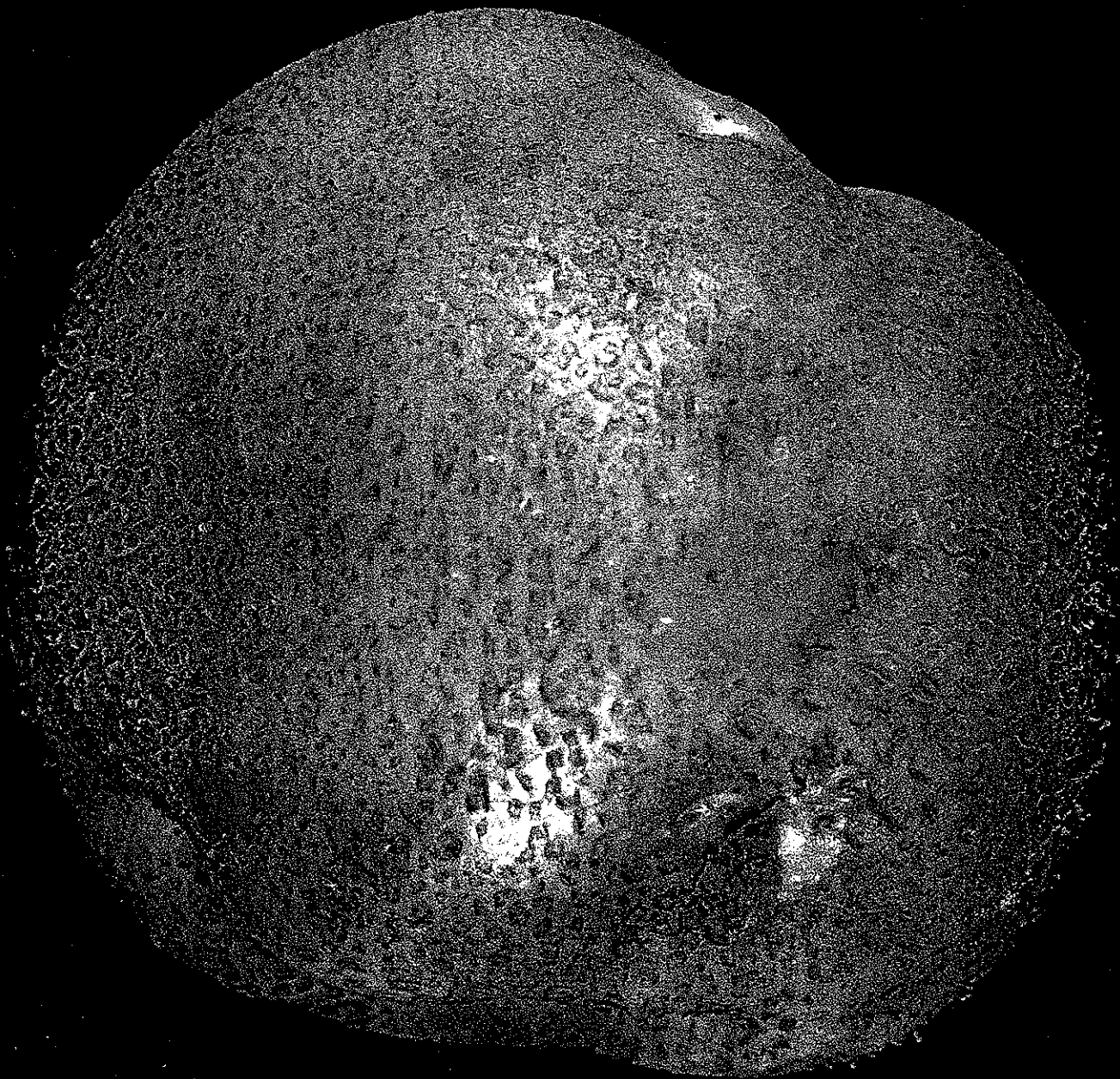
7

WIS 75-30 -Tuber shape

#200100043

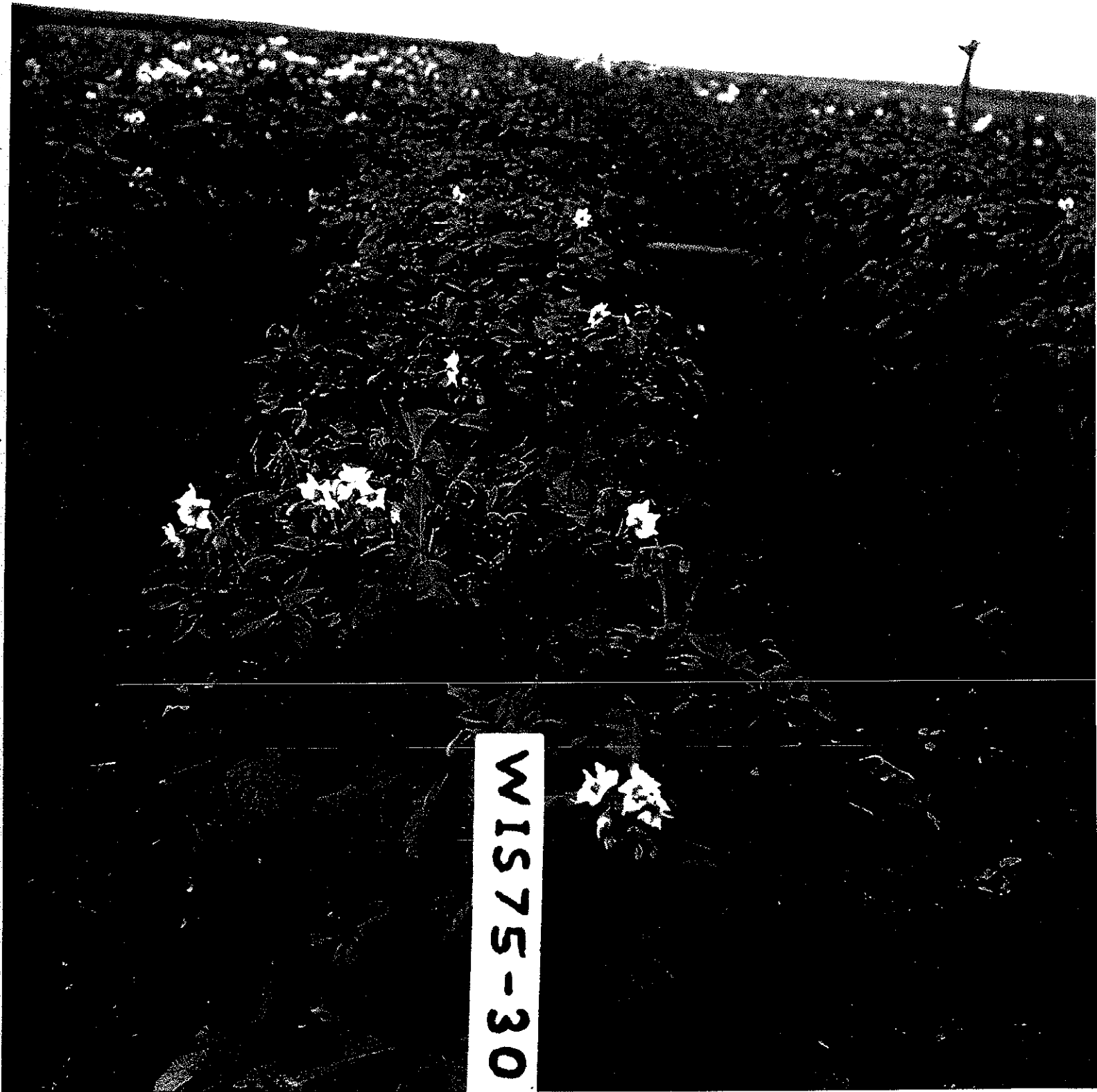
Snowden - tuber shape

#200100043



SNOWDEN

#200100043



#200100043



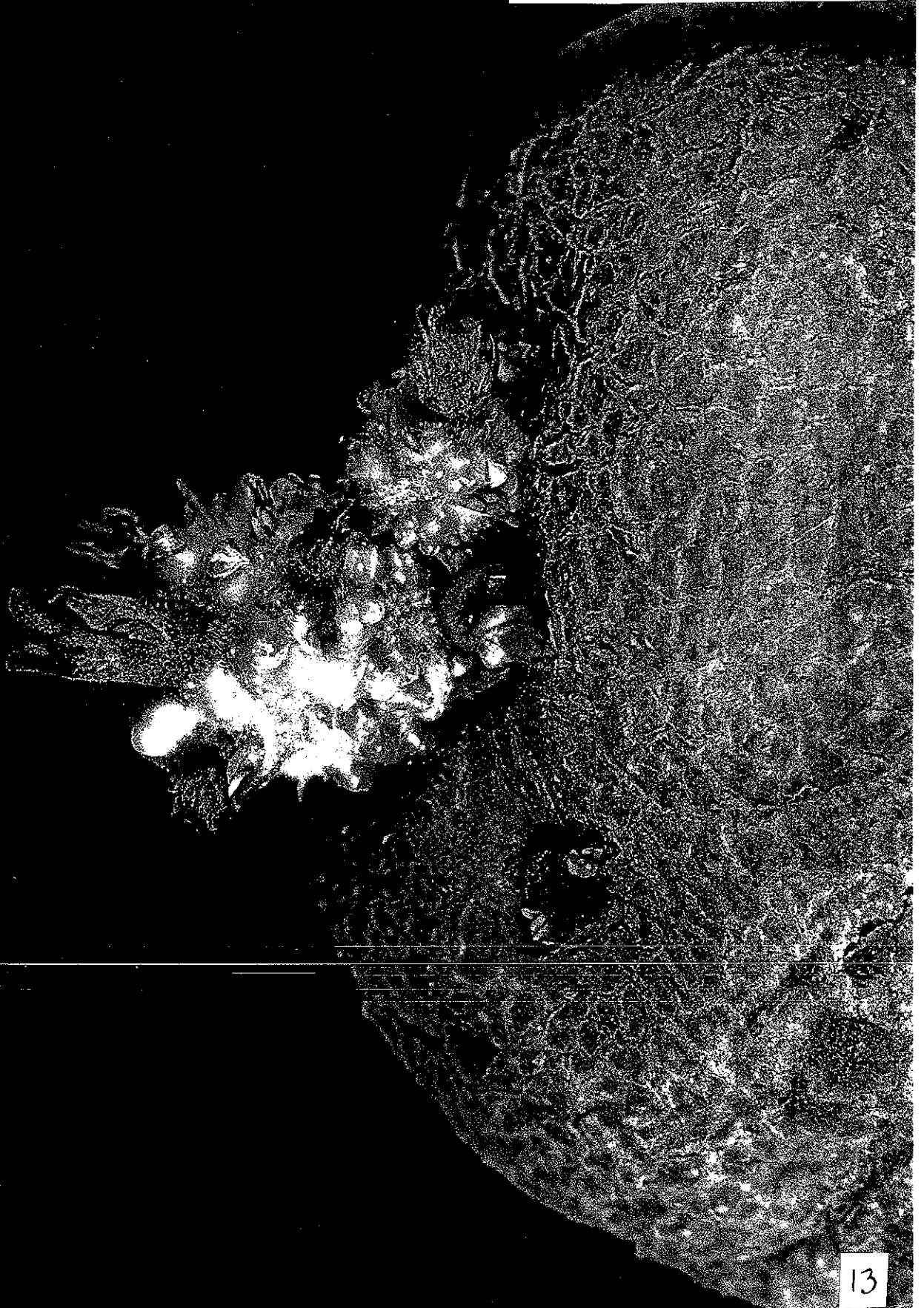
Snowden - growth habit



#200100043

AC GLACIER CHIP (WIS75-30)

#200100043



U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY DIVISION
PLANT VARIETY PROTECTION OFFICE

EXHIBIT C
OBJECTIVE DESCRIPTION OF VARIETY
POTATO (*Solanum tuberosum* L.)

Public reporting burden for this collection of information is estimated to average __ minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the form. Send comments regarding this burden estimate or any other aspects of this collection of information, including suggestions for reducing this burden, to USDA, OIRM, Clearance Officer, AG Box 7630, Washington, DC 20250, regarding OMB No. 0581-0055. When replying, refer to OMB number and form number you your letter.

INSTRUCTIONS

The Objective Description Form:

The objective description form lists characteristics to be used as the basis for developing the description of potato varieties. It is designed to guide the applicant in describing a variety in detail so a meaningful comparison with other potato varieties can be accomplished. It is recommended that this form be completed in as much detail as possible to ensure an accurate description. Please fill in the requested data and place the appropriate number that describes the varietal characters typical of this potato variety and the reference varieties in the respective boxes.

Test Guidelines:

Any statistical and trial (field test) data that may be necessary to support the variety description should be attached to this form. Please include for trial data the plot size, number of replications, number of plants, plant spacing, trial locations and growing periods. Trials should normally be conducted at one place, in the region that the variety has been adapted for, with a minimum of one growing period in the United States. All comparative data should be determined from varieties entered in the same trials. The size of the plots should be such that plants or parts of plants may be removed for measuring and counting without prejudice to the observations which must be made at the end of the growing period. As a minimum, each test should include a total of 60 plants which should be divided between two or more replicates. Separate plots for observation and measuring can only be used if they have been subject to similar environmental conditions. To determine color for a plant or plant parts a recognized standard color chart must be used such as the Royal Horticultural Society (R.H.S.) Color Chart.

Reference Varieties:

The application variety should be compared to at least one reference variety preferably a set of reference varieties. The reference varieties should be market class standard varieties currently grown in the United States and or the variety(ies) most similar. The following varieties are recommended as market class standards to be used as reference varieties:

Yellow-flesh table-stock	Yukon Gold
Round-white table-stock	Superior
Chip-processing	Atlantic, Snowden, Norchip
Frozen-processing	Russet Burbank
Russet table-stock	Russet Burbank, Russet Norkotah, Goldrush
Red table-stock	Red Pontiac, Red Norland, Red Lasoda

If the applicant does not use one of the recommended reference varieties the PVP office may not have a complete description for the reference variety used; therefore the applicant may have to supply this description by completing an Exhibit C form for the reference variety.

Characteristics:

The plant type and growth habit characteristics are collected at early first bloom. Figure 1 is supplied to help visualize the growth habit. For this descriptor, look at the stems rather than the stems and foliage. Plant maturity is measured at natural vine senescence.

Stem characteristics are also collected at early bloom. Stem anthocyanin coloration is divided into two descriptors: Location and intensity. Figure 12 is supplied to give an example of stem wings.

Leaf characteristics are observed at early first bloom. Fully-developed leaves located on the middle third of the plant should be used. Leaf pubescence refers to general trichomes. Figure 2 is supplied for examples of leaf silhouette. Figure 3 should be used to describe terminal and primary leaflet shape. Figures 4 and 5 are used to describe the terminal and primary leaflet shape of tip and base, respectively. To measure the total number of primary leaflets pairs, collect 10 fully-developed petioles (with leaves attached from each replication and take the average number of secondary and tertiary leaflets. Figure 11 is supplied to define leaf characteristics. Glandular trichomes should be described through descriptor #12 (Additional Comments and Characteristics). Leaf stipules are shown in figure 13 for visual definition.

Inflorescence characteristics should be measured at early first bloom. Figures 6 and 7 are supplied to describe corolla and anther shape, respectively. Corolla, calyx, anther, stigma and pollen should be observed on newly opened flowers.

Berry production should be based on field-grown plants rather than greenhouse plants.

Tuber characteristics should be observed following harvest. Figures 9 and 10 are available to describe distribution of secondary color and tuber shape, respectively.

Disease and pest reactions should be based upon specific tests rather than field observations. Other diseases or pests reactions not requested can be described if it is felt that it would be helpful to the description.

Quality characteristics should be described according to the market use.

If the plant is transgenic, this gene insertion(s) should be described.

Chemical identification and any other characteristics can be describe if they are helpful in distinguishing the variety.

A rating system of 1-9 provides a scale for describing most characteristics in this form. Characteristic may be rated with intermediate values where the characteristic grades gradually from one extreme to another. For example, if the character states are described as: 3 = Small; 5 = Medium; 7 = Large; the other values of 1, 2, 4, 6, 8, or 9 may be selected.

Legend:

V = Application Variety

R1-R4 = Reference Varieties

* = Both the reference variety(ies) and application variety must be described for characteristics designated with an asterisk.

NAME OF APPLICANT(S) Agriculture and Agri-Food Canada and Wisconsin Alumni Research Foundation	FOR OFFICIAL USE ONLY PVPO NUMBER 200100043
ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) c/o THE DIRECTOR AGRICULTURE AND AGRI-FOOD CANADA RESEARCH CENTRE, P.O. Box 3000 LETHBRIDGE, ALBERTA CANADA T1J 4B1	VARIETY (V) NAME AL GLACIER CHIP TEMPORARY OR EXPERIMENTAL DESIGNATION W1575-30

REFERENCE VARIETIES: Enter the reference variety name in the appropriate box

Reference Variety 1 (R1)	Reference Variety 2 (R2)	Reference Variety 3 (R3)	Reference Variety 4 (R4)
SNOWDEN			

1. MARKET CHARACTERISTICS:
MARKET CLASS:

1 = Yellow-flesh tablestock; 2 = Round-white tablestock; 3 = Chip-processing; 4 = Frozen-processing;
 5 = Russet tablestock; 6 = Other _____

V	3	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

2. PLANT CHARACTERISTICS:
GROWTH HABIT: (See figure 1)

3 = Erect (>45° with ground); 5 = Semi-erect (30-45° with ground); 7 = Spreading.

V	7	R1	5	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

TYPE:

1 = Stem (foliage open, stems clearly visible); 2 = Intermediate; 3 = Leaf (Foliage closed, stems hardly visible)

V	2	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

MATURITY: Days after planting (DAP) at vine senescence

V	118	R1	118	R2		R3		R4	
---	-----	----	-----	----	--	----	--	----	--

PLANTING DATE:

V	MAY 14, 1999	R1	SEPT. 8, 1999	R2		R3		R4	
---	--------------	----	---------------	----	--	----	--	----	--

REGION/AREA:

V	VAUXHALL, ALBERTA, CANADA	R1	VAUXHALL, ALBERTA, CANADA	R2		R3		R4	
---	------------------------------	----	------------------------------	----	--	----	--	----	--

MATURITY CLASS:

1 = Very Early (<100 DAP); 2 = Early (100-110 DAP); 3 = Mid-season (111-120 DAP); 4 = Late (121-130 DAP);
5 = Very Late (> 130 DAP).

V	3	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

3. STEM CHARACTERISTICS: *Measure at early first bloom** **STEM ANTHOCYANIN COLORATION:**

1 = Absent; 3 = Weak; 5 = Medium; 7 = Strong; 9 = Very Strong

V	1	R1	1	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

STEM WINGS: *(See figure 12)*

1 = Absent; 3 = Weak; 5 = Medium; 7 = Strong; 9 = Very Strong

V	5	R1	7	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

4. LEAF CHARACTERISTICS:**LEAF COLOR:** *(Observe fully developed leaves located on middle 1/3 of plant)*

1 = Yellowish-green; 2 = Olive-green; 3 = Medium green; 4 = Dark green; 5 = Grey-green; 6 = Other _____

V	3	R1	4	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

LEAF COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsell Color Chart

(Observe fully developed leaves located on middle 1/3 of plant & circle the appropriate color chart)

V	138A	R1	139B	R2		R3		R4	
---	------	----	------	----	--	----	--	----	--

LEAF PUBESCENCE DENSITY:

1 = Absent; 2 = Sparse; 3 = Medium; 4 = Thick; 5 = Heavy

V	3	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

LEAF PUBESCENCE LENGTH:

1 = None; 2 = Short; 3 = Medium; 4 = Long; 5 = Very long

V	2	R1	2	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

(Note: Descriptor #19 can be used to describe the type and length of the glandular trichomes observed.)

* **LEAF SILHOUETTE:** *(See figure 2)*

1 = Closed; 3 = Medium; 5 = Open

V	5	R1	5	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

PETIOLES ANTHOCYANIN COLORATION:

1 = Absent; 3 = Weak; 5 = Medium; 7 = Strong; 9 = Very Strong

V	1	R1	1	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

LEAF STIPULES SIZE: (See figure 13)

1 = Absent; 3 = Small; 5 = Medium; 7 = Large

V	5	R1	5	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

TERMINAL LEAFLET SHAPE: (See figure 3 & 11)1 = Narrowly ovate; 2 = Medium ovate; 3 = Broadly ovate; 4 = Lanceolate; 5 = Elliptical;
6 = Obovate; 7 = Oblong; 8 = Other_____

V	3	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

TERMINAL LEAFLET TIP SHAPE: (See figure 4 & 11)

1 = Acute; 2 = Cuspidate; 3 = Acuminate; 4 = Obtuse; 5 = Other_____

V	3	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

*** TERMINAL LEAFLET BASE SHAPE:** (See figure 5 & 11)

1 = Cuneate; 2 = Acute; 3 = Obtuse; 4 = Cordate; 5 = Truncate; 6 = Lobed; 7 = Other_____

V	5	R1	5	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

*** TERMINAL LEAFLET MARGIN WAVINESS:**

1 = Absent; 2 = Slight; 3 = Weak; 4 = Medium; 5 = Strong

V	3	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

NUMBER OF PRIMARY LEAFLET PAIRS: (See figure 11)**AVERAGE:**

V	3.5	R1	3.5	R2		R3		R4	
---	-----	----	-----	----	--	----	--	----	--

RANGE:

V	3 to 4	R1	3 to 4	R2	to	R3	to	R4	to
---	--------	----	--------	----	----	----	----	----	----

PRIMARY LEAFLET TIP SHAPE: (See figure 4 & 11)

1 = Acute; 2 = Cuspidate; 3 = Acuminate; 4 = Obtuse; 5 = Other_____

V	3	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

* **PRIMARY LEAFLET SIZE:**

1 = Very Small; 2 = Small; 3 = Medium; 4 = Large; 5 = Very Large

V	3	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

PRIMARY LEAFLET SHAPE: (See figure 3 & 11)

1 = Narrowly ovate; 2 = Medium ovate; 3 = Broadly ovate; 4 = Lanceolate; 5 = Elliptical;
6 = Obovate; 7 = Oblong; 8 = Other_____

V	2	R1	2	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

PRIMARY LEAFLET BASE SHAPE: (See figure 5 & 11)

1 = Cuneate; 2 = Acute; 3 = Obtuse; 4 = Cordate; 5 = Truncate; 6 = Lobed; 7 = Other_____

V	5	R1	5	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

NUMBER OF SECONDARY AND TERTIARY LEAFLET PAIRS: (See figure 11)

AVERAGE:

V	3.4	R1	3.0	R2		R3		R4	
---	-----	----	-----	----	--	----	--	----	--

RANGE:

V	2 to 5	R1	2 to 4	R2	to	R3	to	R4	to
---	--------	----	--------	----	----	----	----	----	----

5. INFLORESCENCE CHARACTERISTICS:

NUMBER OF INFLORESCENCE / PLANT:

AVERAGE:

V	9.2	R1	3.5	R2		R3		R4	
---	-----	----	-----	----	--	----	--	----	--

RANGE:

V	8 to 12	R1	3 to 5	R2	to	R3	to	R4	to
---	---------	----	--------	----	----	----	----	----	----

NUMBER OF FLORETS / INFLORESCENCE:

AVERAGE:

V	5.4	R1	5.7	R2		R3		R4	
---	-----	----	-----	----	--	----	--	----	--

RANGE:

V	4 to 7	R1	3 to 7	R2	to	R3	to	R4	to
---	--------	----	--------	----	----	----	----	----	----

* **COROLLA INNER SURFACE COLOR CHART VALUE:** Royal Horticulture Society Color Chart or Munsell Color Chart
(Measure predominant color of newly open flower & circle the appropriate color chart)

V	155B	R1	155B	R2		R3		R4	
---	------	----	------	----	--	----	--	----	--

* COROLLA OUTER SURFACE COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsell Color Chart
(Measure predominant color of newly open flower & circle the appropriate color chart)

V	155B	R1	155B	R2		R3		R4	
---	------	----	------	----	--	----	--	----	--

*** COROLLA INNER SURFACE COLOR:** (Measure predominant color of newly open flower)

1 = White; 2 = Red-violet; 3 = Blue-violet; 4 = Other _____

V	1	R1	1	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

COROLLA SHAPE: (See figure 6)

1 = Very rotate; 2 = Rotate; 3 = Pentagonal; 4 = Semi-stellate; 5 = Stellate

V	4	R1	4	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

CALYX ANTHOCYANIN COLORATION:

1 = Absent; 3 = Weak; 5 = Medium; 7 = Strong; 9 = Very strong

V	1	R1	1	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

ANTHER COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsell Color Chart
(Measure when newly opened flower is fully expanded and circle the appropriate color chart)

V	9A	R1	9A	R2		R3		R4	
---	----	----	----	----	--	----	--	----	--

ANTHER SHAPE: (See figure 7)

1 = Broad cone; 2 = Narrow cone; 3 = Pear shape cone; 4 = Loose; 5 = Other _____

V	1	R1	1	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

POLLEN PRODUCTION:

1 = None; 3 = Some; 5 = Abundant

V	3	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

STIGMA SHAPE: (See figure 8)

1 = Capitate; 2 = Clavate; 3 = Bi-lobed

V	1	R1	1	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

STIGMA COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsell Color Chart
(Circle the appropriate color chart)

V	133A	R1	138A	R2		R3		R4	
---	------	----	------	----	--	----	--	----	--

BERRY PRODUCTION: (Under field conditions)

1 = None; 3 = Low; 5 = Moderate; 7 = Heavy; 9 = Very heavy

V	3	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

5. TUBER CHARACTERISTICS:

*

PREDOMINANT SKIN COLOR:

1 = White; 2 = Light Yellow; 3 = Yellow; 4 = Buff; 5 = Tan; 6 = Brown; 7 = Pink; 8 = Red;
 9 = Purplish-red; 10 = Purple; 11 = Dark purple-black; 12 = Other_____

V	1	R1	4	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

PREDOMINANT SKIN COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsell Color Chart
 (Circle the appropriate color chart)

V	158B	R1	164C	R2		R3		R4	
---	------	----	------	----	--	----	--	----	--

SECONDARY SKIN COLOR:

1 = Absent; 2 = Present, please describe: _____

V	1	R1	1	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

SECONDARY SKIN COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsell Color Chart
 (Circle the appropriate color)

V	N/A	R1	N/A	R2		R3		R4	
---	-----	----	-----	----	--	----	--	----	--

SECONDARY SKIN COLOR DISTRIBUTION:

1 = Eyes; 2 = Eyebrows; 3 = Splashed; 4 = Scattered; 5 = Spectacled; 6 = Stippled; 7 = Other_____

V	N/A	R1	N/A	R2		R3		R4	
---	-----	----	-----	----	--	----	--	----	--

SKIN TEXTURE:

1 = Smooth; 2 = Rough (flaky); 3 = Netted; 4 = Russetted; 5 = Heavily russetted; 6 = Other_____

V	1	R1	2	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

*

TUBER SHAPE: (See figure 10)

1 = Compressed; 2 = Round; 3 = Oval; 4 = Oblong; 5 = Long; 6 = Other_____

V	3	R1	2	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

TUBER THICKNESS:

1 = Round; 2 = Medium thick; 3 = Slightly flattened; 4 = Flattened; 5 = Other_____

V	2	R1	2	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

TUBER LENGTH (mm):**AVERAGE:**

V	72.9	R1	66.5	R2		R3		R4	
---	------	----	------	----	--	----	--	----	--

RANGE:

V	52 to 94	R1	45 to 97	R2	to	R3	to	R4	to
---	----------	----	----------	----	----	----	----	----	----

STANDARD DEVIATION:

V	10.9	R1	13.2	R2		R3		R4	
---	------	----	------	----	--	----	--	----	--

AVERAGE WEIGHT OF SAMPLE TAKEN:

V	8.20 kg	R1	8.70 kg	R2		R3		R4	
---	---------	----	---------	----	--	----	--	----	--

TUBER WIDTH (mm):**AVERAGE:**

V	65.3	R1	68.5	R2		R3		R4	
---	------	----	------	----	--	----	--	----	--

RANGE:

V	50 to 83	R1	54 to 95	R2	to	R3	to	R4	to
---	----------	----	----------	----	----	----	----	----	----

STANDARD DEVIATION:

V	8.6	R1	10.4	R2		R3		R4	
---	-----	----	------	----	--	----	--	----	--

AVERAGE WEIGHT OF SAMPLE TAKEN:

V	8.20 kg	R1	8.70 kg	R2		R3		R4	
---	---------	----	---------	----	--	----	--	----	--

TUBER THICKNESS (mm):**AVERAGE:**

V	49.7	R1	53.0	R2		R3		R4	
---	------	----	------	----	--	----	--	----	--

RANGE:

V	37 to 64	R1	44 to 66	R2	to	R3	to	R4	to
---	----------	----	----------	----	----	----	----	----	----

STANDARD DEVIATION:

V	6.4	R1	6.4	R2		R3		R4	
---	-----	----	-----	----	--	----	--	----	--

AVERAGE WEIGHT OF SAMPLE TAKEN:

V	8.20 kg	R1	8.70 kg	R2		R3		R4	
---	---------	----	---------	----	--	----	--	----	--

TUBER EYE DEPTH:

1 = Protruding; 2 = Shallow; 3 = Intermediate; 4 = Deep; 5 = Very deep

V	3	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

TUBER LATERAL EYES

1 = Protruding; 2 = Shallow; 3 = Intermediate; 4 = Deep; 5 = Very deep

V	3	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

NUMBER EYE / TUBER:**AVERAGE:**

V	13.0	R1	9.0	R2		R3		R4	
---	------	----	-----	----	--	----	--	----	--

RANGE:

V	12 to 14	R1	8 to 10	R2	to	R3	to	R4	to
---	----------	----	---------	----	----	----	----	----	----

DISTRIBUTION OF TUBER EYES:

1 = Predominantly apical; 2 = Evenly distributed

V	2	R1	2	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

PROMINENCE OF TUBER EYEBROWS:

1 = Not prominent; 2 = Slight prominence; 3 = Medium prominence; 4 = Very prominent; 5 = Other _____

V	1	R1	1	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

* **PRIMARY TUBER FLESH COLOR CHART VALUE:** Royal Horticulture Society Color Chart or Munsell Color Chart
 (Circle the appropriate color chart)

V	158D	R1	158B	R2		R3		R4	
---	------	----	------	----	--	----	--	----	--

SECONDARY TUBER FLESH COLOR:

1 = Absent; 2 = Present, please describe: _____

V	1	R1	1	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

SECONDARY TUBER FLESH COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsell Color Chart
 (Circle the appropriate color chart)

V	N/A	R1	N/A	R2		R3		R4	
---	-----	----	-----	----	--	----	--	----	--

NUMBER OF TUBERS / PLANT:

1 = Low (<8); 2 = Medium (8 -15); 3 = High (>15)

V	2	R1	2	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

6. DISEASES CHARACTERISTICS:

DISEASES REACTION: 0 = NOT TESTED; 1 = RESISTANT; 3 = MODERATELY RESISTANT;
5 = MODERATELY SUSCEPTIBLE; 7=SUSCEPTIBLE; 9=HIGHLY SUSCEPTIBLE

BACTERIAL RING ROT, FOLIAR REACTION:

V	7	R1	0	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

BACTERIAL RING ROT, TUBER REACTION:

V	5	R1	0	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

LATE BLIGHT:

V	7	R1	0	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

PLRV (LEAF ROLL):

V	0	R1	0	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

PVX:

V	0	R1	0	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

PVY:

V	0	R1	0	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

OTHER:

V	0	R1	0	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

OTHER:

V	0	R1	0	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

7. PESTS CHARACTERISTICS:

PEST REACTION: 0 = NOT TESTED; 1 = RESISTANT; 3 = MODERATELY RESISTANT;
5 = MODERATELY SUSCEPTIBLE; 7=SUSCEPTIBLE; 9=HIGHLY SUSCEPTIBLE

GOLDEN NEMATODE:

V	0	R1	0	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

OTHER:

V	0	R1	0	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

8. GENE TRAITS:

INSERTION OF GENES:

☐

YES

☒

NO

If YES, describe the gene(s) introduced or attach information:

NAME OF APPLICANT (S) AGRICULTURE AND AGRI-FOOD CANADA AND THE UNIVERSITY OF WISCONSIN	TEMPORARY OR EXPERIMENTAL DESIGNATION WIS75-30	VARIETY NAME AC GLACIER CHIP
ADDRESS (Street and No. or RD No., City, State, Zip Code, and Country) 5403 - 1ST AVENUE SOUTH, P.O. Box 3000 LETHBRIDGE, ALBERTA, CANADA		PROFESSIONAL USE ONLY PVPO NUMBER #200100043

REFERENCE VARIETIES: Enter the reference variety name in the appropriate box.

Application Variety (V)	Reference Variety 1 (R1)	Reference Variety 2 (R2)	Reference Variety 3 (R3)	Reference Variety 4 (R4)
WIS75-30	SNOWDEN			

PLEASE READ ALL INSTRUCTIONS CAREFULLY:

1. MARKET CHARACTERISTICS:

*MARKET CLASS:

1 = Yellow-flesh Tablestock 2 = Round-white Tablestock 3 = Chip-processing 4 = Frozen-processing
5 = Russet Tablestock 6 = Other _____

V		R1		R2		R3		R4	
---	--	----	--	----	--	----	--	----	--

2. LIGHT SPROUT CHARACTERISTICS: (See Figure 1)

*LIGHT SPROUT: GENERAL SHAPE

1 = Spherical 2 = Ovoid 3 = Conica 4 = Broad cylindrica 5 = Narrow cylindrical 6 = Other _____

V	3	R1	1	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

*LIGHT SPROUT BASE: PUBESCENCE OF TIP

1 = Absent 2 = Weak 3 = Medium 4 = Strong 5 = Very Strong

V	3	R1	2	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

*LIGHT SPROUT BASE: ANTHOCYANIN COLORATION

1 = Green 2 = Red-violet 3 = Blue-violet 4 = Other(describe) _____

V	2	R1	1	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

*LIGHT SPROUT BASE: INTENSITY OF ANTHOCYANIN COLORATION (IF PRESENT)

1 = Absent 2 = Weak 3 = Medium 4 = Strong 5 = Very Strong

V	5	R1	2	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

* LIGHT SPROUT TIP: HABIT

1 = Closed 2 = Intermediate 3 = Open

V	2	R1	2	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

2. LIGHT SPROUT CHARACTERISTICS: (continued)

#200100043

LIGHT SPROUT TIP: PUBESCENCE

1 = Absent 2 = Weak 3 = Medium 4 = Strong 5 = Very Strong

V	3	R1	3	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

LIGHT SPROUT TIP ANTHOCYANIN COLORATION

1 = Green 2 = Red-violet 3 = Blue-violet 4 = Other(describe) _____

V	2	R1	1	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

LIGHT SPROUT TIP: INTENSITY OF ANTHOCYANIN COLORATION (IF PRESENT)

1 = Absent 2 = Weak 3 = Medium 4 = Strong 5 = Very Strong

V	2	R1	N/A	R2		R3		R4	
---	---	----	-----	----	--	----	--	----	--

LIGHT SPROUT ROOT INITIALS: FREQUENCY

1 = Short 2 = Medium 3 = Long

V	2	R1	2	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

3. PLANT CHARACTERISTICS:

GROWTH HABIT: (See Figure 2)

3 = Erect (>45° with ground) 5 = Semi-erect (30-45° with ground) 7 = Spreading

V		R1		R2		R3		R4	
---	--	----	--	----	--	----	--	----	--

TYPE:

1 = Stem (foliage open, stems clearly visible) 2 = Intermediate 3 = Leaf (Foliage closed, stems hardly visible)

V		R1		R2		R3		R4	
---	--	----	--	----	--	----	--	----	--

MATURITY: Days after planting (DAP) at vine senescence

V		R1		R2		R3		R4	
---	--	----	--	----	--	----	--	----	--

PLANTING DATE:

V		R1		R2		R3		R4	
---	--	----	--	----	--	----	--	----	--

*REGIONAL AREA:

1 = Pacific North West (WA, OR, ID, CO, CA) 2 = North Central (ND, WI, MI, MN, OH) 3 = North East (ME, NY, PA, NJ, MD, MA, RI,)
 4 = Mid-Atlantic East (VI, NC, SC, South NJ, FL) 5 = South (LA, TX, AZ, NE) 6 = Canada
 7 = Europe 8 = England 9 = Latin America 10 = Brazil 11 = Other _____

V		R1		R2		R3		R4	
---	--	----	--	----	--	----	--	----	--

MATURITY CLASS:

1 = Very Early (<100 DAP) 2 = Early (100-110 DAP) 3 = Mid-season (111-120 DAP) 4 = Late (121-130 DAP) 5 = Very Late (>130 DAP)

V		R1		R2		R3		R4	
---	--	----	--	----	--	----	--	----	--

9. QUALITY CHARACTERISTICS:

CHIEF MARKET: CHIP-PROCESSING

SPECIFIC GRAVITY (wt. air /wt. air - wt. water)

1 < 1.060; 2 = 1.060-1.069; 3 = 1.070-1.079; 4 = 1.080-1.089; 5 > 1.090

V	5	R1	5	R2		R3		R4	
---	---	----	---	----	--	----	--	----	--

TOTAL GLYCOALKALOID CONTENT (mg. / 100 g. fresh tuber)

V	8.0	R1	14.5	R2		R3		R4	
---	-----	----	------	----	--	----	--	----	--

OTHER QUALITY CHARACTERISTICS: Describe any other quality characteristics that may aid in identification, (e.g. chip-processing, french fry processing, baking, boiling, after-cooking darkening). Please attach data and corresponding protocol.

11. CHEMICAL IDENTIFICATION:

Describe chemical traits of the candidate variety that aid in its identification (e.g. protein or DNA electrophoresis). Please attach data and the corresponding protocol.

N/A

12. ADDITIONAL COMMENTS AND CHARACTERISTICS:

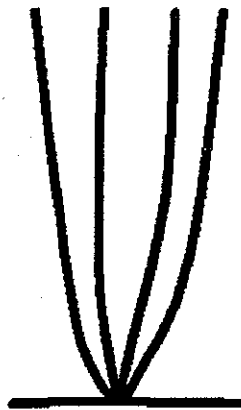
Include any additional descriptors that would be useful in distinguishing the candidate variety.

LIGHT SPROUT

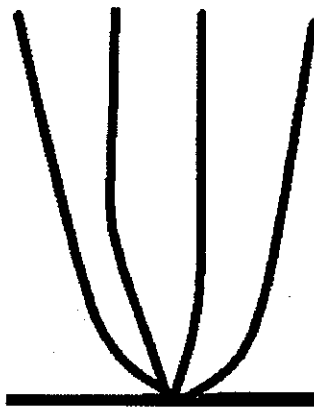
AL GLACIER CHIP: SHAPE - CONICAL
 SNOWDEN : SHAPE - SPHERICAL

AL GLACIER CHIP: PUBESCENCE - MEDIUM
 SNOWDEN : PUBESCENCE - WEAK

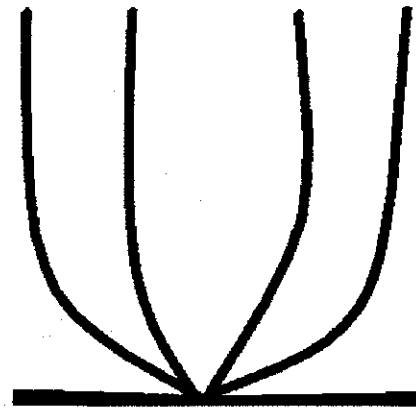
AL GLACIER CHIP: SPROUT BASE - PIGMENTATION - INTENSE RED VIOLET
 SNOWDEN : SPROUT BASE - PIGMENTATION - WEAK BLUE VIOLET

Figure 1: Growth Habit

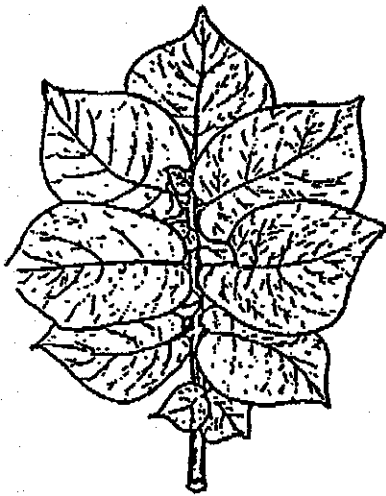
3 = Erect
 $>45^\circ$ with ground



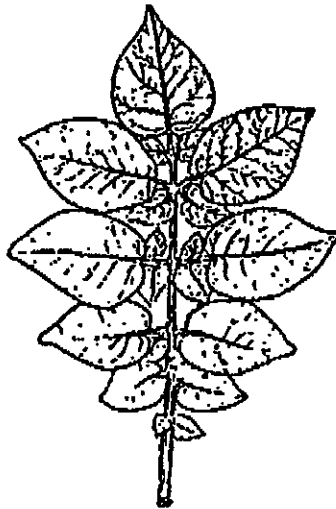
5 = Semi-erect
 $30-45^\circ$ with ground



7 = Spreading
 $<30^\circ$ with ground

Figure 2: Leaf Silhouette

1 = Closed



3 = Medium



5 = Open

Figure 3: Terminal Leaflet Shape / Primary Leaflet Shape



**1=Narrowly
Ovate**



**2=Medium
Ovate**



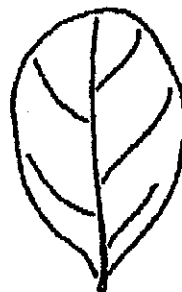
**3=Broadly
Ovate**



4=Lanceolate



5=Elliptical



6=Obovate



7=Oblong

Figure 4: Terminal Leaflet Shape of Tip / Primary Leaflet Shape of Tip

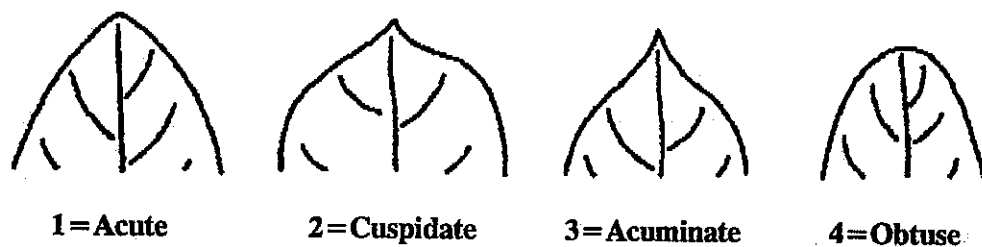


Figure 5: Terminal Leaflet Shape of Base / Primary Leaflet Shape of Base

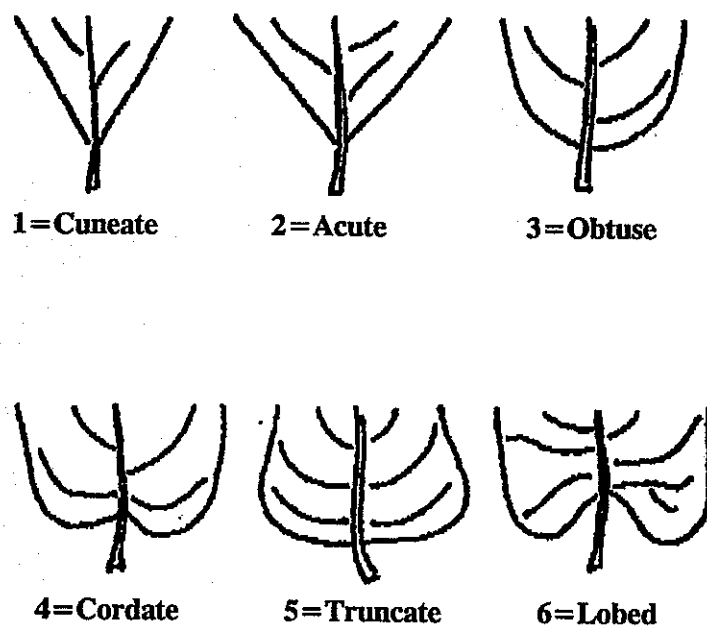
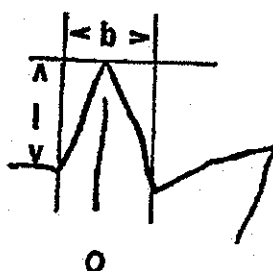


Figure 6: Corolla Shape

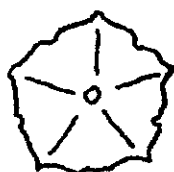
stellate
 $l > b$



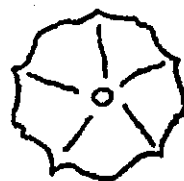
semi-stellate
 $l = b$



pentagonal
 $l < b$



rotate
 $l << b$



very rotate
 $l <<< b$

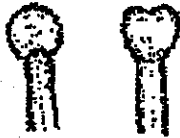
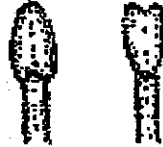
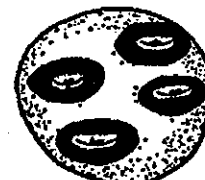
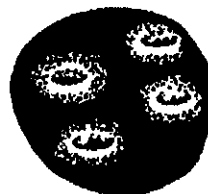
Figure 7: Anther Shape**1=Broad cone****2=Narrow cone****3=Pear shape cone****4=Loose****Figure 8: Stigma Shape****1=Capitate****2=Clavate****3=Bilobed****Figure 9: Distribution of Secondary Tuber Color****1=Eyes****2=Eyebrows****3=Splashed****4=Scattered****5=Spectacled****6=Stippled**

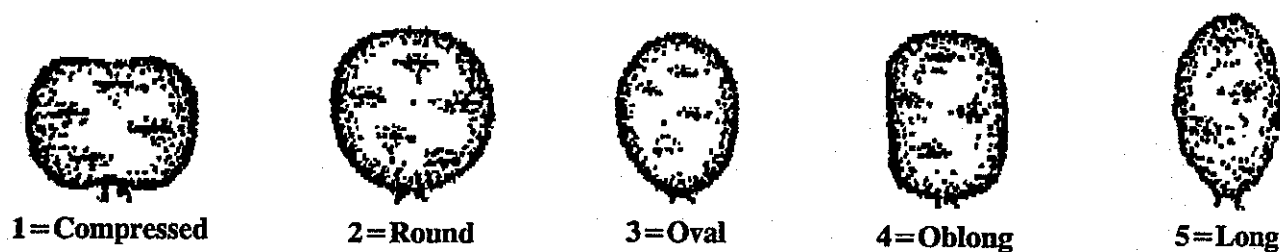
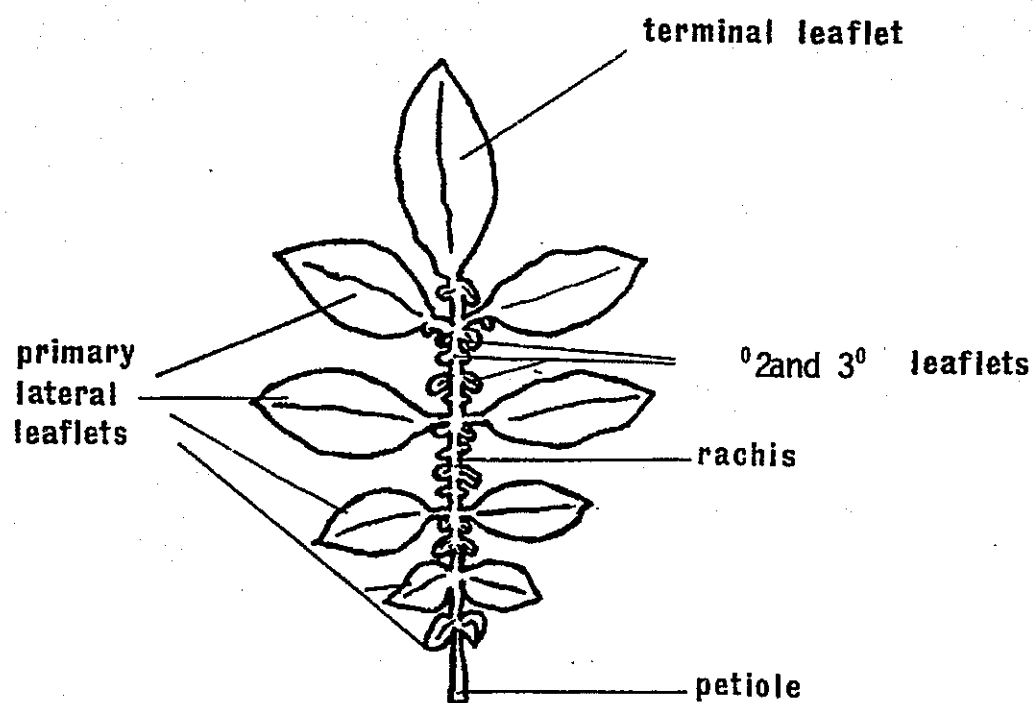
Figure 10: Tuber Shape**Figure 11: Leaf Dissection**

Figure: 12 Stem Wings

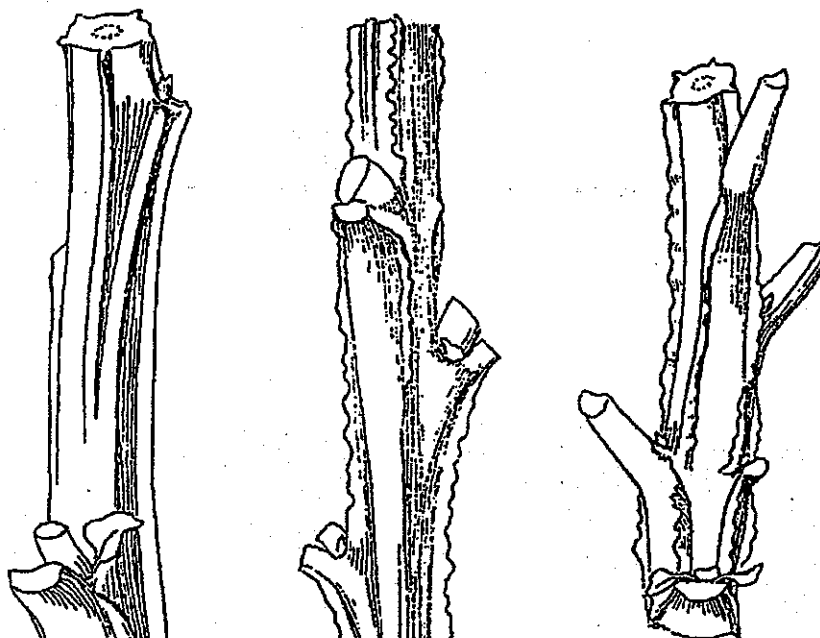
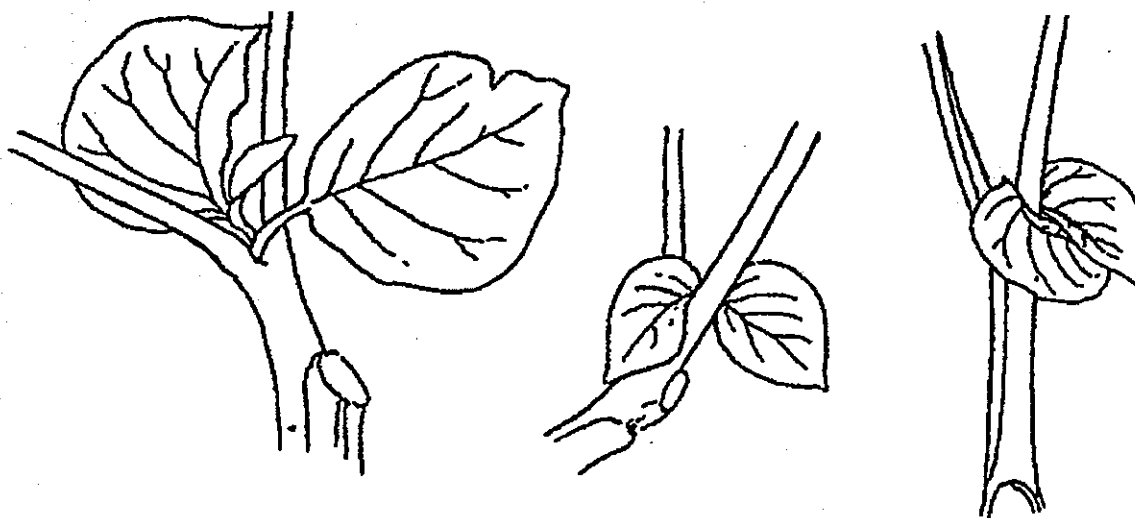


Figure 13: Leaf Stipules:



U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

EXHIBIT E**STATEMENT OF THE BASIS OF OWNERSHIP**

1. NAME OF APPLICANT(S) Agriculture and Agri-Food Canada and Wisconsin Alumni Research Foundation	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER WIS 75-30	3. VARIETY NAME AC Glacier Chip
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) c/o The Director, Agriculture and Agri-Food Canada, Research Centre, 5403-1st Ave South, Lethbridge, Alberta, Canada T1J 4B1	5. TELEPHONE (Include area code) 403-327-4561	6. FAX (Include area code) 403-382-3156
7. PVPO NUMBER 200100043		

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain.

☒

YES

☐

NO

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country.

☐

YES

☒

NO

Canada

10. Is the applicant the original owner?

☐

YES

☒

NO

If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐

YES

☐

NO

If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☒

YES

☐

NO

If no, give name of country

11. Additional explanation on ownership (If needed, use the reverse for extra space):

The original cross (1975) was made by The University of Wisconsin Potato Breeding Program and early generation selection conducted in Rhinelander, Wisconsin. Selected clones of the cross were provided to Agriculture and Agri-Food Canada (Lethbridge Research Centre) in 1980 and the final selection was made by the Lethbridge Research Centre. An inter-institutional agreement between Agriculture and Agri-Food Canada and The Wisconsin Alumni Research Foundation was signed on November 23, 1998 granting Agriculture and Agri-Food Canada the exclusive right to pursue protection of the variety.

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 6 minutes per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

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Form Approved OMB NO 0581-0055

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The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

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AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT F
DECLARATION REGARDING DEPOSIT

NAME OF OWNER (S) Agriculture and Agri-Food Canada and Wisconsin Alumni Research Foundation	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country) 5403-1ST AVENUE SOUTH, P.O. Box 3000, LETHBRIDGE, ALBERTA CANADA	TEMPORARY OR EXPERIMENTAL DESIGNATION WIS 75-30 VARIETY NAME AC GLACIER CHIP
NAME OF OWNER REPRESENTATIVE (S) AGRICULTURE AND AGRI-FOOD CANADA (LETHBRIDGE)	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country) 5403-1ST AVENUE SOUTH P.O. Box 3000, LETHBRIDGE ALBERTA, CANADA	PVP NUMBER #200100043

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

S. Brew
Signature

Mar 13/07
Date